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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,024	02/28/2006	Biswajit Choudhury	FC0016USPCT	1144
7590 Thomas W Gorman E I Du Pont De Nemours and Company Legal Patent Records Center 4417 Lancaster Pike Wilmington, DE 19805			EXAMINER KALAFUT, STEPHEN J	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 07/07/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/570,024

Applicant(s)

CHOUDHURY ET AL.

Examiner

Stephen J. Kalafut

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34, 37-40, 60 and 61 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34, 37-40, 60 and 61 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

Claims 1-34, 37-40, 60 and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite two distinct monomers (1a and 2b) that may be incorporated into the present polymer, each of which includes a side chain, called "Y". There is no indication whether Y must be the same if both monomers are incorporated into the polymer, or if different Y groups may be used. Claim 61 is incomplete because it depends from cancelled claim 56.

The disclosure is objected to because of the following informalities: The numeral 30, in figure 1, is not found in the specification. Appropriate correction is required.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Steck *et al.* (US 6,437,011) and Cho *et al.* (US 7,179,560) disclose electrolyte polymers that include trifluorostyrene chains, where the aromatic groups have substituents. Buck (US 5,876,571) discloses substituted polytetrafluoroethylenes that include perfluoro side chains with SO₂F groups. Kerres *et al.* (US 6,194,474) disclose an organic sulfonated polymer.

Claims 1-34, 37-40 and 60 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The prior art cited above or by applicant does not disclose a fluorinated ion exchange polymer comprising a base polymer, onto which is grafted trifluorostyrene monomers, in which the aromatic ring has a substituent that includes a SO₂ or SO₃ moiety, connected to the ring via a partially fluorinated or

perfluorinated carbon chain, where the SO₂ or SO₃ moiety is also connected to a single fluorine atom, hydrogen, ammonium, an alkali cation, a NH₂ group, or a nitrogen with a second SO₂ moiety and fluorine atom. The references cited in the search report have been reviewed. Although some of these are marked with "X", they do not disclose a substituent in which a SO₂ or SO₃ group is attached to the aromatic ring via a partially fluorinated or perfluorinated chain.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen J. Kalafut/

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Primary Examiner, Art Unit 1795